



Law
AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Shunpei Yamazaki et al. Art Unit : 2812
Serial No. : 10/092,732 Examiner : Alexander G. Ghyka
Filed : March 8, 2002
Title : FILM FORMING APPARATUS AND FILM FORMING METHOD

MAIL STOP AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY TO ACTION OF OCTOBER 5, 2004

In reply to the Final Office Action of October 5, 2004, applicant submits the following remarks.

Claims 1-63 are pending in the application, with claims 1, 8, 15, 22, 29, 36, 42, 48, 53, 54, 56, 59 and 61 being independent. Claims 1-47 have been withdrawn from consideration.

Claims 48-63 have been rejected as being unpatentable over Tang in view of Sloan. In response to applicant's prior argument that neither Tang, Sloan, nor any proper combination of the two describes or suggests heating and separating impurities in a first chamber of an apparatus and evaporating in a second chamber of the same apparatus, the Examiner asserts that doing so would be an obvious design choice in view of Tang's performing of operations in a single chamber.

This argument is flawed in that it assumes that Tang recites performing the separating and evaporating steps in a single chamber, which is not the case. Rather, as acknowledged by the Examiner in the prior office action, Tang fails to describe or suggest separating an impurity along with movement of a heater, as recited in claims 48 and 56, or purifying an organic compound by zone melting, as recited in claims 53, 54, 59 and 61. In view of this failure of Tang, the Examiner turns to Sloan, which, as noted in the prior response, describes a zone refiner that would be an apparatus separate from that described by Tang.

Nothing in Tang or Sloan would have led one of ordinary skill in the art to perform the zone processing described by Sloan in the chamber of the apparatus of Tang. Indeed, doing so would be contrary to the teaching of Tang, which describes a donor support 24 that has been

previously produced and stored on a supply roll 30 for use in Tang's depositing of organic layers in organic light emitting devices. To require further processing of Tang's donor support 24 in the chamber in which this depositing operation occurs would not appear to be a workable solution, and neither Tang nor Sloan provides any indication in support of doing so. As such, one of ordinary skill in the art would not have been motivated to combine Tang and Sloan so as to perform the zone processing of Sloan in the chamber of Tang.

Moreover, even assuming for sake of argument that one would be motivated to combine Tang and Sloan to perform Sloan's processing in Tang's chamber, applicant strongly disagrees that performing the operations in different chambers of the same apparatus would merely be a matter of design choice. Separation of an impurity from an organic compound contained in a first chamber of an apparatus and evaporation of a high-purity organic compound obtained by the separation in a second chamber of the same apparatus has a significant advantage that an organic compound purified in the first chamber can be evaporated over a substrate in the second chamber without the purity of the organic compound decreasing prior to the evaporation. Since the separation and evaporation occur under different conditions (e.g., separation may occur under atmospheric pressure while evaporation occurs under reduced pressure), performing the two processes in the same chamber would be very unwieldy and would present a risk that the purity of the organic compound would be compromised when changing the conditions of the chamber from the separation conditions to the evaporation conditions. By contrast, the two-chamber approach recited in the claims permits an organic compound purified in a first chamber to be immediately available for use in an evaporation process in a second chamber without risk of the reduction in purity that could result from moving the compound to a second apparatus or changing the conditions in a common chamber.

For the reasons presented above, applicant requests withdrawal of the rejection of claims 48-63.

Applicant submits that all claims are in condition for allowance.

Applicant : Shunpei Yamazaki et al.
Serial No. : 10/092,732
Filed : March 8, 2002
Page : 3 of 3

Attorney's Docket No.: 12732-093001 / US5582

No fees are believed to be due. Please apply any charges or credits to deposit
account 06-1050.

Respectfully submitted,

Date: 1/5/04



John F. Hayden
Reg. No. 37,640

Customer No. 26171
Fish & Richardson P.C.
1425 K Street, N.W., 11th Floor
Washington, DC 20005-3500
Telephone: (202) 783-5070
Facsimile: (202) 783-2331